

ABSTRACT OF THE DISCLOSURE

An optical cross-connect apparatus that realizes high throughput in optical cross-connection by performing large-scale switching. An input optical signal processing section converts wavelengths contained in each input WDM signal into wavelengths the number of which is equal to the number of WDM signals, compresses the pulse widths of the WDM signals by dividing the pulse widths by the number of the wavelengths contained in each input WDM signal, and performs a phase shift so that the phases of a plurality of compressed signal will not be the same. A wavelength switching section includes passive optical devices and distributes the optical signals processed by the input optical signal processing section according to wavelengths. An output optical signal processing section converts wavelengths contained in the optical signals distributed by the wavelength switching section into wavelengths recognized from the phases of the optical signals, expands the pulse widths of the optical signals, and outputs WDM signals.

20